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PATENT APPLICATION

METHOD AND SYSTEM FOR SUBMITTING MEDIA FOR NETWORK-BASED PURCHASE AND DISTRIBUTION

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CROSS-REFERENCE TO RELATED APPLICATION

[0001] This application claims the benefit of U.S. Provisional Patent Application No. 60/465,410, filed April 25, 2003, and entitled "METHOD AND SYSTEM FOR SECURE NETWORK-BASED DISTRIBUTION OF MEDIA," and which is hereby incorporated by reference herein.

[0002] This application is related to commonly owned U.S. Patent Application No. _____ (Att.Dkt.No.: APL1P270/3059), filed _____, and entitled "METHOD AND SYSTEM FOR NETWORK-BASED PURCHASE AND DISTRIBUTION OF MEDIA.".

BACKGROUND OF THE INVENTION

Field of the Invention

[0003] The present invention relates to electronic transmission of media and, more particularly, to electronic submission of media for purposes of media purchase and distribution.

Description of the Related Art

[0004] Traditionally, music has been purchased at music stores or music departments of larger stores. A consumer will visit the music store or department and manually browse for albums or compact discs (CDs) of interest. Often, the music in the music store or department is categorized by genre, and then indexed by artist. For example, genre can include rock, country, pop, soul, jazz, etc. After the consumer selects an album or CD of interest, the consumer proceeds to a check-out register to pay for the album or CD being purchased.

[0005] In recent years, music delivery or distribution over the Internet has become popular. Due to the advances in efficient file formats, such as MP3 and MPEG4, the size of media files have become small enough to make their download via the Internet practical. Also, technological advances have led to higher-speed Internet connections and lower cost of memory. The combination of these advances make

downloading media files, such as for music and videos, manageable and not too time consuming.

[0006] Today, various online media hosting sites permit virtual visitors to purchase and download albums or songs via the Internet (e.g., World Wide Web). However, in order for the albums or songs to be offered for purchase and download, the electronic content for the albums or songs must first be provided to the media hosting sites. Conventionally, a music label desirous of selling audio productions of their songs online would produce a tape or CD and then physically mail the tape or CD to a representative for the media hosting site. Typically, a submission would include not only the audio productions of songs but also text and images associated with the songs. The text provides descriptive information (e.g., metadata) for the songs and the images pertain to associated artwork (e.g., cover art). More recently, music labels have electronically transmitted the audio production of their songs to a representative of the media hosting site. Unfortunately, there are various different means and formats by which various music labels submit their audio productions of songs and associated data. This problem is exacerbated by the large number of small music labels that make submissions. As a result, representatives of the media hosting site that receive the submissions face substantial burdens and difficulties due to the wide range of variation with respect to the submissions.

[0007] Thus, there is a need for improved approaches to submit media to an online media hosting site.

SUMMARY OF THE INVENTION

[0008] Broadly speaking, the invention relates to an improved system and method for submitting media to a media distribution site. The submission of media to the media distribution site is able to be performed by numerous submitters in a uniform and computer-assisted manner. The submitted media can then be encoded in a largely automated manner at the media distribution site into a suitable digital form and then made available for online purchase and distribution.

[0009] The invention can be implemented in numerous ways, including as a method, system, device, apparatus, graphical user interface, or computer readable medium. Several embodiments of the invention are discussed below.

[0010] As a method for submission of a media collection to a media distribution site, one embodiment of the invention includes at least the acts of: obtaining metadata for the media collection; identifying media content for a plurality of media items to be included in the media collection, the media content being imported from a media source; converting the identified media content for the plurality of media items into compressed media files; obtaining metadata for the identified media content; forming an electronic package of the media collection, the electronic package including at least the compressed media files and the metadata associated with the media collection and the identified media content; and electronically transmitting the electronic package to the media distribution site.

[0011] As a computer readable medium including at least computer program code for submission of a media collection to a media distribution site, one embodiment of the computer readable medium includes at least: computer program code for identifying media content for a plurality of media items to be included in the media collection, the media content being imported from a media source; computer program code for converting the identified media content for the plurality of media items into compressed media files; computer program code for obtaining metadata for the identified media content; computer program code for forming an electronic package of the media collection, the electronic package including at least the compressed media files and the metadata associated with the identified media content; and computer program code for electronically transmitting the electronic package to the media distribution site.

[0012] As a graphical user interface for submitting a media collection to a media distribution site, one embodiment of the invention includes at least: a media collection information window used to receive media collection information; an import window used to designate media items to be imported from one or more media sources; and a media content information window used to receive media content information pertaining to the designated media items.

[0013] Other aspects and advantages of the invention will become apparent from the following detailed description taken in conjunction with the accompanying drawings which illustrate, by way of example, the principles of the invention.

BRIEF DESCRIPTION OF THE DRAWINGS

- [0014]** The invention will be readily understood by the following detailed description in conjunction with the accompanying drawings, wherein like reference numerals designate like structural elements, and in which:
- [0015]** FIG. 1 is a block diagram of a media submission and distribution system according to one embodiment of the invention.
- [0016]** FIG. 2 is a flow diagram of a media submission process according to one embodiment of the invention.
- [0017]** FIGs. 3A and 3B are flow diagrams of a media submission process according to another embodiment of the invention.
- [0018]** FIG. 4 is a screenshot of a representative media collection information window according to one embodiment of the invention.
- [0019]** FIG. 5 is a screenshot of a representative import window according to one embodiment of the invention.
- [0020]** FIG. 6 is a screenshot of a representative media content information window according to one embodiment of the invention.
- [0021]** FIG. 7 is a screenshot of a representative folder send window according to one embodiment of the invention.
- [0022]** FIG. 8 is a flow diagram of a media reception process according to one embodiment of the invention.
- [0023]** FIG. 9 is a screenshot of a representative text file in a markup language format according to one embodiment of the invention.

DETAILED DESCRIPTION OF THE INVENTION

- [0024]** The invention relates to an improved system and method for submitting media to a media distribution site. The submission of media to the media distribution site is able to be performed by numerous submitters in a uniform and computer-assisted manner. The submitted media can then be encoded in a largely automated manner at the media distribution site into a suitable digital form and then made

available for online purchase and distribution. The media distribution site can also be referred to as an online media hosting site.

[0025] The invention pertains to a method and system for controlled submission of media in a client-server environment. The controlled submission can use encryption and user accounts to restrict unauthorized access. The media can, for example, be audio, video, or image data.

[0026] Embodiments of various aspects of the invention are discussed below with reference to FIGs. 1 – 9. However, those skilled in the art will readily appreciate that the detailed description given herein with respect to these figures is for explanatory purposes as the invention extends beyond these limited embodiments.

[0027] FIG. 1 is a block diagram of a media submission and distribution system 100 according to one embodiment of the invention. The media submission and distribution system 100 includes a media distribution site 102. The media distribution site 102 coordinates submission (receipt), storage and purchase of media items. The media distribution site 102 stores media items in a media store 103. In one embodiment, the media store 103 is a database. The media store 103 provides mass storage of the numerous media items that are available for purchase. Once purchased, the media items can be accessed from the media store 103 over a data network 106 by way of the media distribution site 102.

[0028] The media submission and distribution system 100 also includes a first client 104 and a second client 105. Typically, the media submission and distribution system 100 would include a plurality of different clients 104, 105. The first client 104 includes a media management/player 108. The second client 105 includes a media submission program 110. Some clients can also include both the media management/player 108 and the media submission program 110. The media management/player 108 is an application program (e.g., software application) that operates on the first client 104, which is a computing device. One example of a suitable media management/player 108 is iTunes™ offered by Apple Computer, Inc. The first client 104 is coupled to the media distribution site 102 through the data network 106. Hence, any of the first clients 104 can interact with the media distribution site 102 to review, purchase and/or manage media items.

[0029] The media submission program 110 is also an application program (e.g., software application) that operates on the second client 105, which is a computing device. The media submission program 110 is used to submit media items to the media distribution site 102. Although the media management/player 108 and the media submission program 110 are shown in FIG. 1 as separate programs, it should be understood that such programs can be integrated into a single program or reside on the same second client.

[0030] In the media submission and distribution system 100 shown in FIG. 1, the media items are submitted to the media distribution site 102 by way of the media submission program 110. The media items that have been submitted (e.g., via the second client 105) are processed and then stored in the media store 103. Thereafter, the stored media item are available to be purchased from the media distribution site 102. Upon purchasing a particular media item, the media distribution site 102 permits the media content for the particular media item to be retrieved from the media store 103 and then delivered (e.g., downloaded) from the media distribution site 102 to the corresponding client 104 through the data network 106. In this regard, the media distribution site 102 obtains the media content corresponding to the particular media item from the media store 103 and downloads such content through the data network 106 to the client 104. The downloaded media content can then be stored on the client 104. In one embodiment, the downloaded media content is encrypted as received at the client 104 but is decrypted and then perhaps re-encrypted before persistent storage on the client 104. Thereafter, the media management/player 108 can present (e.g., play) the media content at the client 104.

[0031] The media submission and distribution system 100 allows a user of the client 104 to utilize the media player 108 to browse, search or sort through a plurality of media items that can be purchased from the media distribution site 102. The media management/player 108 may also allow the user to preview a media clip of the media items. In the event that the user of the media management/player 108 desires to purchase a particular media item, the user (via the media management/player 108) and the media distribution site 102 can engage in an online commerce transaction in which the user pays for access rights to the particular media item. In one embodiment, a credit card associated with the user is credited for the purchase amount of the particular media item.

[0032] The submission and purchase of the media items can be achieved over a data network 106. In other words, the submission and purchase of the media items can be achieved online. The purchase of media items online can also be referred to as electronic commerce (e-commerce). In one embodiment, the data network 106 includes at least a portion of the Internet. The clients 104 can vary with application but generally are computing devices that have memory storage. Often, the clients 104 are personal computers or other computing devices that are capable of storing and presenting media to their users.

[0033] The connections through the data network 106 between the media distribution server 102 and the clients 104, 105 can be through secure connections, such as Secure Sockets Layer (SSL). Further, the media content can be re-encrypted prior to storage at the client 104 such that downloaded media content is not stored in the clear, but is instead stored in an encrypted manner.

[0034] FIG. 2 is a flow diagram of a media submission process 200 according to one embodiment of the invention. The media submission process 200 is typically performed by a client machine, such as the client 105 illustrated in FIG. 1. More particularly, the media submission program 110 at the client 105 illustrated in FIG. 1 can perform the media submission process 200.

[0035] The media submission process 200 begins with a decision 202 that determines whether a media collection is to be arranged for submission from a client machine to a server machine (e.g., media distribution site). When the decision 202 determines that a media collection is not to be arranged for submission at this time, then the media submission process 200 awaits a request to arrange a media collection. In other words, the media submission process 200 can be invoked whenever a request to arrange a media collection is received. Typically, a user of the client machine would interact with the client machine (e.g., the media submission program 110) to initiate a request to arrange a media collection.

[0036] In any case, once the decision 202 determines that a media collection is to be arranged, media content for a plurality of media items are identified. The identified media content for the media items is to be included within the media collection being arranged. Typically, the media content for these media items is retrieved from one or more media sources. Examples of media sources are compact

discs (CDs) or media files. After the media content has been identified 204, the media content for each of the media items is converted 206 into a compressed format. Here, in the case of compact discs, the stored data is in a format that is not suitable for transmission over networks. Hence, typically, the format of the media content from compact disc is converted into a compressed format that is suitable for transmission through networks. Examples of compressed formats for audio files include Advanced Audio Coding (AAC), MPEG (e.g., MPEG4), MP3 and M4 files.

[0037] Next, metadata pertaining to the media items is obtained 208. In one embodiment, the metadata for the media items includes descriptive information regarding the media items. The metadata is, in one embodiment, provided by a user through interaction with the client machine (e.g., the media submission program 110).

[0038] Thereafter, an electronic package is formed 210 for the media collection. The electronic package is, for example, an electronic folder that includes a plurality of files. The plurality of files within the electronic folder include a file for the media content (in its compressed format) for each of the media items, folder metadata, and possibly other files. Here, the folder metadata can include not only the metadata for the media items, but also other metadata pertaining to the media collection and/or the organization of the electronic folder and components within the electronic folder. An example of one type of other file would be a file of an image that is to be associated with the media collection. The image, for example, can pertain to artwork to be utilized in association with the media collection. After the electronic package has been formed 210, the electronic package can be transmitted 212 to a media distribution site (e.g., server) for online purchase and distribution. The transmission 212 of the electronic package to the media distribution site concludes the media submission process 200.

[0039] Advantageously, the electronic packages being formed and transmitted to a media distribution site can have a standard format and arrangement. As a result, the media distribution site is able to process the incoming electronic packages in an automated manner.

[0040] Many users of the media submission process 200 can be affiliated with small recording labels or artists that desire to submit their media collections to media

distribution sites so that such media collections can be offered for purchase at the media distribution sites. The standardization and uniformity provided by the media submission process 200 significantly reduces the burdens and difficulties otherwise placed on the media distribution sites.

[0041] FIGs. 3A and 3B are flow diagrams of a media submission process 300 according to another embodiment of the invention. The media submission process 300 is typically performed by a client machine, such as the client 105 illustrated in FIG. 1. More particularly, the media submission program 110 at the client 105 illustrated in FIG. 1 can perform the media submission process 300.

[0042] The media submission process 300 initially displays 302 a media collection information window. Then, media collection information that has been entered into the media collection information window can be received 304. Here, the media submission process 300 receives 304 the media collection information that is entered into media collection information window by a user of the client machine (e.g., user of the media submission program 110). A representative media collection information window according to one embodiment of the invention is discussed below with reference to FIG. 4.

[0043] Next, media content for media items to be provided within the media collection is identified 306. The media content being identified 306 represents that portion of the available media content from one or more media sources that is to be provided within the media collection. Examples of media sources are compact discs (CDs) or media files. In one implementation, to assist a user with the identification 306 of the media content for the media items, an import window can be displayed. The import window would assist the user with the identification of media items / media content to be included within the media collection. A representative import window according to one embodiment of the invention is discussed below with reference to FIG. 5.

[0044] After the media content has been identified 306, the identified media content is converted 308 into a compressed media format. Here, the conversion 308 can be considered to encode the media content from a media source into a digital format suitable for electronic transmission and playing (such as MP3, M4, AAC, etc.). Encoding, in this context, refers to the process by which traditional forms of audio

(e.g., compact disc) and video (e.g., VHS) are converted into a digital format that allows their distribution and broadcast over a network (e.g., the Internet).

[0045] Next, a media content information window is displayed 310. The media content information window assists the user to provide media content information regarding one or more of the media items. After the media content information window is displayed 310, media content information that has been entered into the media content information window is received 312. Here, the media submission process 300 receives 312 the media content information that is entered into media content information window by the user of the client machine (e.g., user of the media submission program 110). A representative media content information window according to one embodiment of the invention is discussed below with reference to FIG. 6.

[0046] After the media content information that has been entered into the media content information window has been received 312, an electronic folder for the media collection is formed 314. The electronic folder includes a plurality of different files, typically some of which are different data types. For example, the media content for each media item within the media collection is provided as a digital media file (e.g., MPEG4 format), and the media collection information and the media content information are provided within a text file (e.g., markup language file, such as an XML file). The text file can also provide a description of the electronic folder that specifies the media and other files within the electronic folder as well as the media collection information and the media content information. If the text file identifies artwork for the media collection or the media items, then the text file specifies an image file (e.g., JPEG format) provided within the electronic folder that contains the artwork image.

[0047] Next, a folder send window is displayed 316. The folder send window assists the user in providing user indicia prior to submission of the media collection to the media distribution site. In one implementation, the user indicia is an account identifier and a password. A representative folder send window according to one embodiment of the invention is discussed below with reference to FIG. 7.

[0048] After the user indicia has been provided via the folder send window, a decision 318 determines whether the electronic folder is to be sent (i.e., submitted)

at this time. Here, the user can decide whether the electronic folder should be submitted at this time. For example, the user can choose whether the electronic folder should be submitted at this time using the folder send window.

[0049] When the decision 318 determines that the electronic folder should not be submitted at this time, then the electronic folder is placed 320 in a send queue. Once placed in the send queue, the electronic folder is stored at the client machine until such time as the electronic folder is eventually sent. On the other hand, when the decision 318 determines that the electronic folder should be sent, then the electronic folder is transmitted 322 to the media distribution site. Additionally, if other media collections were earlier queued by the media submission process 300, then any previously queued folders could also be sent to the media distribution site. Following the blocks 320 or 322, the media submission process 300 is complete and ends.

[0050] FIG. 4 is a screenshot of a representative media collection information window 400 according to one embodiment of the invention. A user can interact with the media collection information window 400 to enter the media collection information. Using the media collection information window 400, media collection information, such as title, title kind (e.g., live, remix, etc.), artist, genre, label (i.e., music label), copyright, SKU, UPC, release date, sale start date, original release year, parental advisory, recording location, liner notes, and cover art, can be provided. As shown in FIG. 4, the media collection information window 400 has several fields completed, which contain media collection information.

[0051] FIG. 5 is a screenshot of a representative import window 500 according to one embodiment of the invention. The import window assists a user with importing media items from media sources. Here, for the media collection "Playlist No. 1 Title", eight (8) media items (i.e., tracks) have been designated for import from import sources denoted "CD" or "Files." The media collection is referred to as a playlist.

[0052] FIG. 6 is a screenshot of a representative media content information window 600 according to one embodiment of the invention. The representative media content information window 600 displays the media items in an upper area 602 and provides a lower area 604 for a user to enter the media content information pertaining to specific ones of the media items. The media items (i.e., tracks) shown

in the upper region 602 correspond to the media items that were imported (see FIG. 5). Upon selecting one of the media items in the upper area, the media content information to be associated with such media item can then be entered in the lower area 604 which provides text entry fields. As shown in FIG. 6, the media content information for a particular media item can include such information as: title, title kind, artist, genres, track number, preview start, disk number, BPM, label name, copyright, ISRC, SKU, availability for sale indicator, parental advisory, recording location, and lyrics.

[0053] FIG. 7 is a screenshot of a representative folder send window 700 according to one embodiment of the invention. The folder send window 700 allows the user to identify the provider of the media collection (such as the name or producer of the music label), the account identifier associated with the provider (user), and a password. Additionally, the folder send window 700 enables the user to either submit the media collection (e.g., playlist) that has been assembled to the media distribution site 102 by a "Send" button 702, or to defer submission by an "Add to Queue" button 704.

[0054] FIG. 8 is a flow diagram of a media reception process 800 according to one embodiment of the invention. The media reception process 800 is typically performed by a server machine, namely, a media distribution site, such as the media distribution site 102 illustrated in FIG. 1.

[0055] The media reception process 800 initially receives 802 an electronic package submission. As previously noted, the electronic package submission would be received 802 at a media distribution site (e.g., the media distribution site 102). Then, the electronic package (e.g., electronic folder) is unpacked 804 into its various components. The unpacking 804 can involve obtaining the various media files and metadata from the electronic package. The metadata is typically provided within a text file. The text file can include organizational information as well as descriptive information for the media content. The organizational information can specify what components are provided within the electronic package. Hence, the unpacking 804 can include parsing of the text file to acquire not only the descriptive information but also the organizational information. In one embodiment, the text file is provided in a markup language (e.g., XML) and thus can be parsed using a markup language parser. Following the unpacking 804, the components of the electronic package can

be stored 806 to a media store (e.g., media store 103). The media reception process 800 is then complete and ends. Following the media reception process 800, the media distribution site is able to render the media collection available for purchase online. For example, the media can be purchased online through a music site that is accessible by client machines through the Internet.

[0056] FIG. 9 is a screenshot of a representative text file 900 in a markup language format according to one embodiment of the invention. In particular, the markup language format can, for example, be XML. The text file 900 has a header region 902, a media collection metadata region 904 with an artwork portion 906, a media item metadata region 908, and a media content region 910. The header region 902 identifies an electronic package, a tool used to produce the electronic package, and its provider. The media collection metadata region 904 contains playlist or album metadata. The artwork portion 906 indicates an image file and MD5 message digest that serves as a digital signature for the image file. The media item metadata region 908 provides metadata for each of the media items in the electronic package (e.g., track metadata). The media content region 910 indicates a media file (e.g., audio track file) and a MD5 message digest that serves as a digital signature for the media file.

[0057] The various aspects, features, embodiments or implementations of the invention described above can be used alone or in various combinations.

[0058] The media items can pertain to audio items (e.g., audio files or songs, such as for music), video items (e.g., video files or movies), or image items (e.g., photos).

[0059] The invention is preferably implemented by software, but can also be implemented in hardware or a combination of hardware and software. The invention can also be embodied as computer readable code on a computer readable medium. The computer readable medium is any data storage device that can store data which can thereafter be read by a computer system. Examples of the computer readable media include read-only memory, random-access memory, CD-ROMs, DVDs, magnetic tape, optical data storage devices, and carrier waves. The computer readable medium can also be distributed over network-coupled computer systems so that the computer readable code is stored and executed in a distributed fashion.

[0060] The advantages of the invention are numerous. Different embodiments or implementations may, but need not, yield one or more of the following advantages. One advantage of the invention is that submission of media to online media hosting sites can be achieved with uniformity. The uniformity eases the burden on representatives of the online media hosting sites to process the media submissions. Another advantage of the invention is that media submissions can be processed in an automated manner.

[0061] The many features and advantages of the present invention are apparent from the written description and, thus, it is intended by the appended claims to cover all such features and advantages of the invention. Further, since numerous modifications and changes will readily occur to those skilled in the art, the invention should not be limited to the exact construction and operation as illustrated and described. Hence, all suitable modifications and equivalents may be resorted to as falling within the scope of the invention.

What is claimed is: